

Range-Based Auto-Focus, Phase I

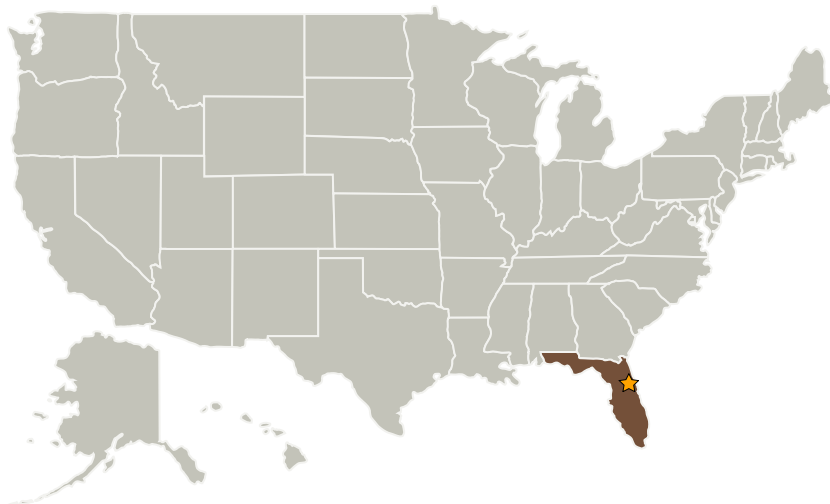
Completed Technology Project (2007 - 2007)



Project Introduction

Maracel Systems and Software Technologies, LLC proposes a revolutionary Range-Based Auto Focus (RBAF) system that will combine externally input range, such as might be received from a tracking radar or GPS telemetry downlink, with advanced image processing to provide long range optical systems with optimal focus while mitigating distortions due to atmospheric disturbances. The system will be optimized to focus on moving targets generating potentially high focus dynamics and to focus only on the subject of the imagery -- not background artifacts such as rocket plumes. The significant implication of this development is a substantial improvement in the quality and quantity of data gathered by optical data acquisition systems. Through research, empirical trials, and algorithm development, the outcome of the Phase I effort will be a prototype system that demonstrates the improved focus capabilities and commercial viability of the RBAF system. Phase II development will result in production packages with comprehensive interface documentation for modular components of a complete RBAF system that may be manufactured and integrated with long-range optical systems without further engineering design effort. This will yield a complete product ready for commercialization that includes production quality technical and user documentation.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Maracel Systems & Software Technologies, LLC	Supporting Organization	Industry	Crestview, Florida

Primary U.S. Work Locations

Florida

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
 - └ TX12.2 Structures
 - └ TX12.2.3 Reliability and Sustainment